

SECTION 02609

GREASE AND SAND INTERCEPTOR

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Modular precast concrete grease interceptor sections with joint covers, access holes, anchorage, cast iron ring, grate, and accessories.
- B. Modular precast concrete sand interceptor sections with joint covers, access holes anchorage, cast iron ring, grate, and accessories.

1.02 RELATED SECTIONS

1.03 REFERENCES

- A. AASHTO M-105: Gray Iron Castings.
- B. AASHTO M-199: Precast Reinforced Concrete.
- C. ASTM C-923: Resilient Connectors Between Reinforced Concrete Structures and Pipes.

1.04 SUBMITTALS FOR REVIEW

- A. Product Data: Provide ring & covers, component construction, features, configuration, and dimensions.

1.05 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum three years documented experience.

1.06 GENERAL REQUIREMENTS

- A. When determined by the Building Inspection department that grease control is required, per Chapter 10 of the International Plumbing Code, one of two types of control shall be used.
 - 1. Grease Interceptors or (outdoor, gravity):
 - a. Grease interceptors are required on all new building construction or retrofits with more than eight fixtures installed in the food preparation areas unless otherwise approved by the City.
 - b. A sampling manhole shall be located below the downstream outlet.
 - 2. Grease Traps or (indoor, hydro mechanical):
 - a. Grease traps may be allowed on retrofits with minimal fixtures as approved by the City Engineer.

- b. Grease traps shall NOT be allowed if commercial dishwasher is installed in facility. However, the City may allow if a standalone grease trap on dishwasher outlet prior to discharge into sewer is properly installed.
 - c. Grease traps shall be installed beneath the floor. Above floor grease traps shall not be allowed.
- B. The Contractor shall furnish and install watertight cast-in-place or precast concrete grease interceptors and sand interceptors as required by the City Engineer or City Officials.
- C. Grease interceptors and sand interceptors shall be furnished complete with cast iron rings and covers.
- D. Design of grease/sand interceptors and grease traps need to be approved by City Engineer.
- E. Flow Channels
 - 1. The flow channel through Grease interceptors shall conform with the slope of the sewer.
 - 2. Adjacent floor area should drain to the channel with the minimum slope of 1 inch per foot.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Manufacturers:
 - 1. Amcor.
 - 2. Geneva Pipe.
 - 3. Dura-crete.
- B. Grease interceptor Sections and sand interceptor: Reinforced precast concrete in accordance with AASHTO M-199 with gaskets in accordance with ASTM C923.
- C. Mortar and Grout: Type S.

2.02 COMPONENTS

- A. Grease Interceptors
 - 1. Outdoor gravity grease interceptors shall have a minimum of two compartments.
 - 2. The minimum size for grease interceptors shall be 750 gallons.
 - 3. Wall Sections to be designed to meet ASTM C858 with AASHTO HS-20 loading:
 - a. Interceptors shall be constructed of 6" thick precast reinforced concrete. Box size to be 3-foot by 3-foot and the height as shown on plans. Provide grade rings as needed.

- b. Grease interceptor shall be designed to meet ASTM C-875 “minimum structural design loading for underground precast concrete utility structures. Provide grade rings as needed.
- c. All joint surfaces of precast sections and the face of the walls, base, and grade rings shall be thoroughly cleaned and wet prior to setting precast sections.
- d. All joints including grade rings shall be set in mortar consisting of 1 part cement and 1 ½ parts sand with sufficient water added to bring the mixture to workable consistency, or the joints shall be sealed with butyl rubber gasket that is permanently flexible and non-shrinking, similar to Brandt No. 95 Cold Weather Vault Sealant.

4. Lid and Frame:

- a. All iron castings shall conform to the requirements of H-20 loading for grey iron castings.
- b. Rings and grates shall have machined bearing surfaces and a minimum cover weight of 150 pounds and minimum ring weight of 233 pounds.
- c. The foundry name, year of manufacture, and “SEWER”, “STORM DRAIN”, or “IRRIGATION” shall be marked on the cover.
- d. All Grease interceptor and clean-out box rings shall be carefully set to the grade as shown on the approved drawings or as directed by the Engineer.
- e. Grate covers shall be so installed to be within 1/4" from the finished surface.
- f. A concrete ring 6" wide and 6" thick will be poured around lid in accordance with Section 03304.

B. Grease Traps

- 1. Grease traps shall be an indoor hydro mechanical system.
- 2. A flow control device shall be installed upstream of the trap unless trap inlet pipe limits flow. Gravity flow capacity of pipes flowing full at ¼" slope: 2"=20gpm, 3"=60gpm, 4"=125gpm, 5"=203gpm, 6"=375gpm.
- 3. The minimum size for grease traps shall be 50 gallons per minute and 100 pound capacity.
- 4. The storage capacity of grease traps shall be a minimum of two times the flow capacity. The density of grease is approximately 7.3 lb/gal.
- 5. Grease traps shall be designed for peak flow.
- 6. Garbage disposals require solids separator prior to grease trap.

2.03 CONFIGURATION

- A. Shape: rectangular.

- B. Design Size: design criteria to be submitted to the City Engineer for review.
- C. Clear Great and Lid Opening: 24 inches diameter.
- D. Pipe Inlet and Outlet: Pipe inlet and outlet to be grouted to eliminate infiltration and leakage.

PART 3 EXECUTION

3.01 PLACING CONCRETE SECTIONS

- A. Place base pad, trowel top surface level.
- B. Place Grease interceptor and sand interceptor plumb and level, trim to correct elevations, anchor to base pad.
- C. Cut and fit for pipe as required.
- D. Grout base of shaft sections to achieve slope to exit piping.
- E. Provide grade rings and needed Trowel smooth. Contour as required.
- F. Set cover frames and covers level without tipping, to correct elevations.

3.02 SCHEDULES

- A. Grease interceptors and sand interceptors: Precast concrete sections, copolymer polypropylene plastic steps, to depth indicated, with tamper proof lid.

END OF SECTION